

35USC 102 and 35 USC 103. Applicant respectfully requests that this Response to the First Office Action be accepted, considered and examined as a response to the rejection of claims 1-5 and Claim 8. Applicant acknowledges and accepts the allowance granted with respect to Claim 6 and 7. In his regard, it should also be noted that this response is not being filed within the three month shortened statutory period for response set in the Office Action.

For reasons set forth in the accompanying Request for Extension of Time, Applicant, through counsel, hereby respectfully requests an Extension of Time to file the subject Response to First Office Action and Amendment to the Claims. The required fee for filing of the extension is submitted herewith. Further, Applicant requests reconsideration of the Application in light of the withdrawal of Claims 1-5, the cancellation of Claim 8 and the insertion of the new Claim 9 in its place.

Based upon a thorough review of the Specification, Claims and prior art submitted by the Examiner, Applicant, through counsel, hereby submits the following Amendment to the Claims of the subject application:

In the Claims:

Claims 1-5 and claim 8 have been rejected under 35 U. S. C. 112, paragraph two as being indefinite. Additionally, claims 1-5 have been rejected under 35 USC 102 and 35 USC 103. In response to the rejection of Claims 1-5 and the reasons presented by the Examiner for their rejection, Applicant respectfully requests as follows:

Applicant respectfully requests that the Examiner withdraw claims 1-5 from further consideration with respect to this Application.

With regard to the rejection of Claim 8 for indefiniteness under 35 USC 112 second paragraph, Applicant respectfully requests that Claim 8 be cancelled and new Claim 9 inserted in its place.

Claim 9. (New) -- The tooth brush as claimed in claim 7 wherein each tuft of bristles consists of not less than ten bristles and wherein each of said bristles has one spiral groove along the longitudinal axis thereof and wherein said spiral groove on said bristle in an individual tuft of bristles is identical to said spiral groove on all of said bristles in said tuft of bristles and wherein said spiral groove on each of said bristles in said tuft has a clockwise or counter clockwise spiral on said bristle. --

#### **ORIGINAL CLAIMS**

What I claim is:

Claim 1. A bristle consisting of a base end, and a tip end connected to each other by means of a substantially rigid shaft portion wherein said substantially rigid shaft of said bristle has at least one shallow spiral groove along its longitudinal axis and wherein said substantially rigid shaft is sufficiently flexible so that said bristle will twist, bend and rotate on its axis when said base end of said bristle is held in a fixed position on a brush device and vertical and horizontal pressures applied to the tip of said bristle in a brushing motion such that the twisting, bending and rotating of said bristle upon the application of vertical and horizontal pressure on the tip of said bristle causes the tip of said bristle and said substantially rigid shaft of said bristle to become an abrasive device with respect to the surfaces to be cleaned and wherein said twisting, bending and rotating of said bristle

increases with the application of increased pressure on the tip of said bristle.

Claim 2. The bristle as claimed in claim 1 wherein the cross-sectional diameter of said spiral groove is approximately 10 to 15 percent of the cross-sectional diameter of said bristle and wherein said at least one spiral groove on said bristle runs either in a clockwise or counterclockwise direction and wherein on an individual bristle said at least one spiral groove run in clockwise or counter-clockwise direction as desired, to facilitate the removal of plaque and other waste materials during the cleaning process.

Claim 3. A bristle as claimed in Claim 1 wherein said bristle has at least one spiral groove along said substantially rigid shaft and wherein said groove is of uniform diameter throughout the length of said substantially rigid shaft and wherein the ratio of the diameter of said bristle to the diameter of said spiral groove is approximately 4:1.

Claim 4. The bristle claimed in claim 10 wherein said bristle made of a plastic material and wherein said bristle is of such flexibility as to be capable of bending and rotating on an axis of thirty to ninety degrees when used in scrubbing or cleaning.

Claim 5. A bristle as claimed in claim 1 for use in toothbrushes said bristle consisting of a base end, and a tip end connected to each other by a substantially rigid shaft portion and wherein said base end of said bristle is maintained in a fixed position on the head of said toothbrush and wherein said substantially rigid shaft of said bristle has at least one shallow spiral groove along its longitudinal axis and wherein said bristle is capable of standing substantially rigid on the head of said toothbrush but is sufficiently flexible so that said bristle will twist, bend and rotate on its axis, but remains substantially rigid when

vertical and horizontal pressures are applied to the tip of said bristle during brushing and such that the twisting, bending and rotating of said bristle upon the application of vertical and horizontal pressure on the tip of said bristle causes the tip end of said bristle and substantially rigid shaft of said bristle to act as an abrasive device with respect to the surfaces to be cleaned, and wherein the twisting, bending and abrasiveness of said substantially rigid shaft causes said toothbrush to be a more effective cleanser and wherein the application of vertical and horizontal pressure in a back and forth scrubbing motion on the tip of said bristle causes said bristle to twist and rotate in the manner of an agitator of a washing machine, thereby producing fluid cross currents in the saliva and forces the saliva into the spaces in and around the teeth and gums and wherein the twisting and bending of said shaft of said bristle increases the contacts between said shaft of said bristle and the surface of the teeth and gums so that said groove on said shaft of said bristle acts as an abrasive device to remove foreign particles lodged between and around the teeth and gums.

Claim 6. A brush device for use in cleaning and scrubbing including a bristle receiving body portion having a plurality of substantially rigid bristles disposed therein and wherein said body portion of said device has a plurality of holes adapted for receiving said bristles and wherein said bristles are arranged in tufts of bristles and wherein each of said bristles has at least one spiral groove along the longitudinal axis of said substantially rigid shaft of said bristle wherein the scrubbing action of said brush device causes said bristle to bend and twist about its axis and to agitate liquid substances which are present in the area to be cleaned and wherein the tips of said bristles and said substantially rigid shaft of said

bristles act as cleaning surfaces and whereby said longitudinal axis having said spiral groove acts as an extended scraping device with respect to the surface to be cleaned.

Claim 7. A toothbrush having a head portion and a handle portion wherein said head portion has a plurality of holes adapted for receiving tufts of bristles in each hole and wherein each tuft consists of not less than ten bristles each of said bristles having at least one spiral groove along the longitudinal axis of said bristle and wherein upon the application of pressure to the tips of said bristles and use of a scrubbing action thereon said bristle bends and rotates and agitates saliva in the mouth and wherein said tips and said longitudinal axis of said bristles act as cleaning surfaces with respect to the teeth and gums and whereby said longitudinal axis having said spiral grooves acts as an extended scraping device for the removal of waste materials, including plaque, from the teeth and gums.

Claim 8. A brush device as claimed in claim 7 wherein said at least one spiral groove on said bristle runs either in a clockwise or counter clockwise direction and wherein on an individual bristle said at least one spiral groove runs clockwise or counterclockwise, only, and wherein said bristle when arranged in tufts of bristles said at least one spiral groove on said bristle comprising said tufts of bristles all run in either a clockwise or counterclockwise direction.

### **AMENDED CLAIMS**

What I claim is:

Claim 1. [A bristle consisting of a base end, and a tip end connected to each other by means of a substantially rigid shaft portion wherein said substantially rigid shaft

of said bristle has at least one shallow spiral groove along its longitudinal axis and wherein said substantially rigid shaft is sufficiently flexible so that said bristle will twist, bend and rotate on its axis when said base end of said bristle is held in a fixed position on a brush device and vertical and horizontal pressures applied to the tip of said bristle in a brushing motion such that the twisting, bending and rotating of said bristle upon the application of vertical and horizontal pressure on the tip of said bristle causes the tip of said bristle and said substantially rigid shaft of said bristle to become an abrasive device with respect to the surfaces to be cleaned and wherein said twisting, bending and rotating of said bristle increases with the application of increased pressure on the tip of said bristle.]

Claim 2. [The bristle as claimed in claim 1 wherein the cross-sectional diameter of said spiral groove is approximately 10 to 15 percent of the cross-sectional diameter of said bristle and wherein said at least one spiral groove on said bristle runs either in a clockwise or counterclockwise direction and wherein on an individual bristle said at least one spiral groove run in clockwise or counter-clockwise direction as desired, to facilitate the removal of plaque and other waste materials during the cleaning process.]

Claim 3. [A bristle as claimed in Claim 1 wherein said bristle has at least one spiral groove along said substantially rigid shaft and wherein said groove is of uniform diameter throughout the length of said substantially rigid shaft and wherein the ratio of the diameter of said bristle to the diameter of said spiral groove is approximately 4:1.]

Claim 4. [The bristle claimed in claim 10 wherein said bristle made of a plastic material and wherein said bristle is of such flexibility as to be capable of bending and

rotating on an axis of thirty to ninety degrees when used in scrubbing or cleaning.]

Claim 5. [A bristle as claimed in claim 1 for use in toothbrushes said bristle consisting of a base end, and a tip end connected to each other by a substantially rigid shaft portion and wherein said base end of said bristle is maintained in a fixed position on the head of said toothbrush and wherein said substantially rigid shaft of said bristle has at least one shallow spiral groove along its longitudinal axis and wherein said bristle is capable of standing substantially rigid on the head of said toothbrush but is sufficiently flexible so that said bristle will twist, bend and rotate on its axis, but remains substantially rigid when vertical and horizontal pressures are applied to the tip of said bristle during brushing and such that the twisting, bending and rotating of said bristle upon the application of vertical and horizontal pressure on the tip of said bristle causes the tip end of said bristle and substantially rigid shaft of said bristle to act as an abrasive device with respect to the surfaces to be cleaned, and wherein the twisting, bending and abrasiveness of said substantially rigid shaft causes said toothbrush to be a more effective cleanser and wherein the application of vertical and horizontal pressure in a back and forth scrubbing motion on the tip of said bristle causes said bristle to twist and rotate in the manner of an agitator of a washing machine, thereby producing fluid cross currents in the saliva and forces the saliva into the spaces in and around the teeth and gums and wherein the twisting and bending of said shaft of said bristle increases the contacts between said shaft of said bristle and the surface of the teeth and gums so that said groove on said shaft of said bristle acts as an abrasive device to remove foreign particles lodged between and around the teeth and gums.]

Claim 6. A brush device for use in cleaning and scrubbing including a bristle receiving body portion having a plurality of substantially rigid bristles disposed therein and wherein said body portion of said device has a plurality of holes adapted for receiving said bristles and wherein said bristles are arranged in tufts of bristles and wherein each of said bristles has at least one spiral groove along the longitudinal axis of said substantially rigid shaft of said bristle wherein the scrubbing action of said brush device causes said bristle to bend and twist about its axis and to agitate liquid substances which are present in the area to be cleaned and wherein the tips of said bristles and said substantially rigid shaft of said bristles act as cleaning surfaces and whereby said longitudinal axis having said spiral groove acts as an extended scraping device with respect to the surface to be cleaned.

Claim 7. A toothbrush having a head portion and a handle portion wherein said head portion has a plurality of holes adapted for receiving tufts of bristles in each hole and wherein each tuft consists of not less than ten bristles each of said bristles having at least one spiral groove along the longitudinal axis of said bristle and wherein upon the application of pressure to the tips of said bristles and use of a scrubbing action thereon said bristle bends and rotates and agitates saliva in the mouth and wherein said tips and said longitudinal axis of said bristles act as cleaning surfaces with respect to the teeth and gums and whereby said longitudinal axis having said spiral grooves acts as an extended scraping device for the removal of waste materials, including plaque, from the teeth and gums.

Claim 8. [A brush device as claimed in claim 7 wherein said at least one spiral groove on said bristle runs either in a clockwise or counter clockwise direction and wherein



on an individual bristle said at least on spiral groove runs clockwise or counterclockwise, only, and wherein said bristle when arranged in tufts of bristles said at least one spiral groove on said bristle comprising said tufts of bristles all run in either a clockwise or counterclockwise direction.]

Claim 9. (New) -- The tooth brush as claimed in claim 7 wherein each tuft of bristles consists of not less than ten bristles and wherein each of said bristles has one spiral groove along the longitudinal axis thereof and wherein said spiral groove on said bristle in an individual tuft of bristles is identical to said spiral groove on all of said bristles in said tuft of bristles and wherein said spiral groove on each of said bristles in said tuft has a clockwise or counter clockwise spiral on said bristle. --

#### CLEAN COPY OF CLAIMS

Claim 6. A brush device for use in cleaning and scrubbing including a bristle receiving body portion having a plurality of substantially rigid bristles disposed therein and wherein said body portion of said device has a plurality of holes adapted for receiving said bristles and wherein said bristles are arranged in tufts of bristles and wherein each of said bristles has at least one spiral groove along the longitudinal axis of said substantially rigid shaft of said bristle wherein the scrubbing action of said brush device causes said bristle to bend and twist about its axis and to agitate liquid substances which are present in the area to be cleaned and wherein the tips of said bristles and said substantially rigid shaft of said bristles act as cleaning surfaces and whereby said longitudinal axis having said spiral groove acts as an extended scraping device with respect to the surface to be cleaned.

Claim 7. A toothbrush having a head portion and a handle portion wherein said head portion has a plurality of holes adapted for receiving tufts of bristles in each hole and wherein each tuft consists of not less than ten bristles each of said bristles having at least one spiral groove along the longitudinal axis of said bristle and wherein upon the application of pressure to the tips of said bristles and use of a scrubbing action thereon said bristle bends and rotates and agitates saliva in the mouth and wherein said tips and said longitudinal axis of said bristles act as cleaning surfaces with respect to the teeth and gums and whereby said longitudinal axis having said spiral grooves acts as an extended scraping device for the removal of waste materials, including plaque, from the teeth and gums.

Claim 9. (New) The tooth brush as claimed in claim 7 wherein each tuft of bristles consists of not less than ten bristles and wherein each of said bristles has one spiral groove along the longitudinal axis thereof and wherein said spiral groove on said bristle in an individual tuft of bristles is identical to said spiral groove on all of said bristles in said tuft of bristles and wherein said spiral groove on each of said bristles in said tuft has a clockwise or counter clockwise spiral on said bristle.

#### REMARKS

Applicant has amended the application to correct the errors cited by the Examiner in the Office Action. Specifically, claims 1-5 have been withdrawn, claim 8 has been cancelled and new claim 9 has been inserted in its place.

Applicant believes new claim 9 corrects the deficiencies cited by the Examiner as the basis for rejection of Claim 8. In particular, Applicant has corrected the language of the